EXHIBIT

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

BRAUN GmbH,)
)
Plaintiff,)
)
-vs-) No. 03-CV-12428 (WGY)
)
RAYOVAC CORPORATION,)
)
Defendant.)

Videotaped deposition through interpreter of NORBERT SMETANA taken before CAROL CONNOLLY, CSR, CRR, and Notary Public, pursuant to the Federal Rules of Civil Procedure for the United States District Courts pertaining to the taking of depositions, at Braun GmbH, Frankfurter Strasse 145, D-61476 Kronberg im Taunus, Germany, at 10:14 a.m. on the 29th day of April, A.D., 2005.

There were present at the taking of this deposition the following counsel:

ROPES & GRAY, LLP by
MS. LESLEY F. WOLF
One International Place
Boston, Massachusetts 02110-2624
(617) 951-7000
on behalf of the Plaintiff;

KIRKLAND & ELLIS, LLP
MR. JAMES SHIMOTA
200 East Randolph Drive
Chicago, Illinois 60601
(312) 861-2000

on behalf of the Defendant;

ALSO PRESENT: Mr. Uwe Sievers
Braun GmbH;

Dr. Wolfgang Stutius
Ropes & Gray;
Ms. Jeanette Fröhlich
Interpreter;

Mr. Kevin Duncan
Legal Videographer.

VIDEOTAPED DEPOSITION OF
NORBERT SMETANA

April 29, 2005

THE VIDEOGRAPHER: Good morning. We are going on the video record at 10:14 a.m. Today's date is April 29, 2005. My name is Kevin Duncan, and I am a certified legal videographer in association with LegaLink Chicago. The court reporter today is Ms. Carol Connolly.

Here begins the videotaped deposition of Mr. Norbert Smetana taken in the matter of Braun GmbH versus Rayovac in the United States District Court for the District of Massachusetts. This deposition is being held at the Braun company in Kronberg, Germany.

Will counsel please identify themselves for the record and state whom they represent starting with the noticing party.

MR. SHIMOTA: Jim Shimota from Kirkland and Ellis appearing on behalf of defendant Rayovac Corporation.

MS. WOLF: Lesley Wolf of Ropes and Gray appearing on behalf of the Braun company.

THE VIDEOGRAPHER: Will the court reporter swear in the interpreter and also the witness.

JEANETTE FRÖLICH,
called as an Interpreter herein, was sworn to interpret questions from English to German and answers from German to English:

NORBERT SMETANA,
called as a witness herein, having been first duly sworn, was examined upon oral interrogatories and testified as follows:

EXAMINATION

By Mr. Shimota:

THE VIDEOGRAPHER: You may begin please.

MR. SHIMOTA: Q Good morning, Mr. Smetana.

A Good morning.

Q Would you please state your name for the record?

A My name is Norbert Smetana.

Q And would you also give your address?

A I'm living here in Kronberg. The street is Beckinrig 7. You need the -- 61476, Kronberg.

Q That's fine. Before we begin, I'd like to go through a few bits of deposition basics. You understand that you are here today to answer questions that I ask you, correct? And in -- in addition, if you would, when I ask you a question, you need to provide an audible

answer. Can you do that?

A Yes.

Q And if during the course of the day I ask you a question which you do not understand, would you please tell me that? Again if you --

A Sure. I tell you.

Q And, additionally, if there's ever a question that I ask you which you would like to have translated into English, would you please ask for that as well?

A Yes, I will do so.

Q And if during the course of the day you've given an answer, which you later determine is incomplete or inaccurate, would you also tell me that?

A Yes, of course.

Q And is there any reason that you can think of sitting here today that you are unable to answer my questions truthfully and accurately?

A No, I feel fine today.

Q Thank you. Mr. Smetana, where are you employed?

A I'm employed in the R & D development and the subdivision is now called OEM products for hair care.

Q And are you employed at Braun GmbH?

A Yes.

Q And how long have you been employed by Braun?

A I've been working for this company since 19 -- December, 1986. That means nearly 20 years. Not really. 19, 18.

Q And from December of 1986 to the present have you been continuously employed in the R & D group?

A Yes, within the R & D organization.

Q If you could take me briefly through where you have worked starting from beginning of your employment until today?

A I think that there were three main positions starting with, let's say, more or less an expert in fluid dynamics, knowing more or less the complex rules for small fans and blowers for several appliances. The next step was to go forward to the -- to our own development of hair dryer, hair care products. From the research department this step to development department, and yes, maybe main step that the task of our group is now to support the so-called OEM activities in combination with other companies who support us.

Q How did you become an expert in fluid dynamics?

A From my study. I studied mechanical engineering. It's minor machine general, mechanical engineering in Darm Stadt and here you have the choice

to focus more or less to your interests, and this was the way I came to turbo machines and fluid dynamics and stuff like this.

Q What -- I don't know -- if you told me this, I apologize. What university did you study mechanical engineering at?

A It was technical high school -- I don't know whether university is now technical university now in Darm Stadt.

Q Could you please tell Darm Stadt?

A D-A-R-M then S-T-A-D-T.

Q And what course work did you take in order to gain knowledge as to fluid dynamics?

A We had courses you can choose and others which are --

THE INTERPRETER: Compulsory?

THE WITNESS: Compulsory, yes, and there was a mixture. Compulsory was the fluid dynamic basic course and then the lessons I choose for myself was more like turbo machinery, special points of fluid dynamics like --

THE INTERPRETER: Dimension analysis and disturbance calculation.

THE WITNESS: That's really very special.

MR. SHIMOTA: Q Did you take courses in thermal dynamics?
A Yes, thermal dynamics. That was also compulsory, yes.
Q Do you -- are you familiar with the term chemical engineering or -- with the term?
A Chemical --
Q Chemical engineering or maybe the term here is process engineer.
A I'm not familiar with chemical things besides what I learned in basic school.
THE INTERPRETER: In 13th grade.
DR. STUTIUS: It's all high school.
THE WITNESS: It's my also combination between chemical processes and engineering things. I had no special lessons on this, but it was not -- from time to time you get in connection with stuff, especially advanced technique like --
THE INTERPRETER: Heat exchange.
THE WITNESS: Heat exchanges and things like this.
MR. SHIMOTA: Q It's not particularly important. I studied chemical engineering in the United States. Sounds like you took the same courses I took, but that's just --

A Maybe we're different.
Q They're a lot of the same courses.
Did you pursue any further studies after receiving your degree in Darm Stadt?
A No, no further official studies.
Q And what year did you receive your degree at Darm Stadt?
A When?
Q Which year?
A In which year? That was in 1986.
Q So am I correct that you began working at Braun after receiving your degree?
A That's right, yes.
Q Were you employed by any other companies prior to coming to Braun?
A No.
Q During the course of your work in the R & D group, did you regularly maintain a laboratory notebook?
A We -- not a notebook in the sense of really a book, but, of course, we had our notices not only of piece of paper but in documents, in ream books and so on, but I'm not sure whether you mean by lab book really -- binded --
DR. STUTIUS: Bound.

THE WITNESS: Bound collection of papers.
MR. SHIMOTA: Q That's what I meant, but I guess -- or how would you -- in general during the course of your career, how would you keep written records of the work that you had performed?
A Yeah. At the beginning the computers were not so distributed then we had more paperwork in these simple ring folders.
MS. WOLF: Binders.
THE WITNESS: Sorry. In these ring binders. And with all the helps you can have there, and nowadays, of course, basically on the computer systems and in addition on these ring binders.
MR. SHIMOTA: Q When you mention these ring binders, what types of documents would be contained in the ring binders?
A This is more -- maybe a process depending on the different persons. Normally I -- immediately I tend to keep more or less everything, and then with the months and years you sort it out and only keep what is really important, what is essential points and also sometimes later when you are very sure that a project is definitely finished and some lawyer time has also passed then you can give away all the development documents.

Q You mentioned I believe notices. Can you explain to me what you meant by notices?
A Notices starts when you sit together with a colleague by writing down something or then --
THE INTERPRETER: It's notes.
THE WITNESS: Notices is different.
MR. SHIMOTA: Q I understand. Are you referring to handwritten notes?
A Also, yes.
Q And would it also be typed or notes that would be typed out?
A Yeah.
Q These would be generated either during or after meetings with colleagues?
A That's possible, yes.
Q What -- if you would have a meeting with a colleague, in general, what would be your person practice with respect to note taking?
A That depends. That depends on the person. If you really tried to get rather deep in an idea you always will have sketches, and then the sketches look strange as you can imagine technical sketches can look, and -- yeah. Sometimes -- when it's more important you can write a summary, and this is basically done with

computers.
Q When you would write a summary, would you attempt to do so soon after the meeting you had with a colleague?
A Not always because there's not always the time to do so, and it's not necessarily every time after a meeting.
Q Okay. Well, why would you -- in what circumstances would you write a summary on a computer of the -- of a meeting?
A In general now if this is a meeting with external partners we usually write a summary. In many cases also two summaries from their side, from our side. Of course, if you are asked to do so -- and in other cases -- maybe it's not summary with words, it's a word document, but also to document the results with a calculation program, for instance. If you discuss geometry of a special part then you can also fix the results in a calculation form and so on.
Q You -- do you have e-mail now at Braun?
A Yes.
Q And do you recall when you first gained access to e-mail at Braun?
A No, I'm not sure now.

Q Would it have been more than 5 years ago?
A I think so. Yes, we had a different system to what we use now, but that was not so common for all employees. I cannot figure the date exactly.
Q Were there two different types of e-mail systems at Braun?
A No. What I can remember prior to this official notes system maybe only within R & D group we have machines which have additional features to find out telephone numbers and to leave short notes to someone else, but that's not a mail system you can compare to what we know today.
Q The system that was within the R & D group, did you have access to that?
A I don't know because -- actually I did not use this. It was not perfected. Normally I took the phone to give information or to ask someone.
Q So am I correct that you personally would not have communicated with the system in the R & D group?
A Yes.
Q And am I correct that you currently have a Lotus Notes e-mail system?
A Yes.
Q And just also to be sure, you don't know when

you first gained access to the Lotus Notes system?
A I think it was about before the year 2000, but I'm not sure.
Q Aside from Lotus Notes, did Braun ever have any other type of e-mail system except for the -- what we talked about in the R & D group?
A Did we start with Lotus Notes? I'm not sure.
Q Are you aware that there is currently a patent litigation between Braun and Rayovac or Remington regarding shaver cleaning systems?
A I know this headline, yes.
Q In general are you aware that at least some of the subject matter of that litigation is shaver cleaning system developed at Braun?
A Could you repeat it again, please?
Q Sure. Are you in general aware that at least part of the subject matter of the litigation is a shaver cleaning system which was developed at Braun?
A Yes. Yes, I'm aware.
Q And did you have any role in the development of the shaver cleaning system at Braun?
MS. WOLF: Objection as to form.
You can answer if you understand the question.
THE WITNESS: I think I could help my colleagues to

develop or to optimize especially the blowing system which the first shaver cleaning center has to dry the shaver or the shaving foil after the cleaning process.
MR. SHIMOTA: Q Do you recall -- let me ask you, what did you do to optimize the blowing system?
A I think, first of all, we had to find out what is really necessary to fulfill this wish of drying a shaver after the cleaning process, which parameters you need to do this in a rather short time without being too noisy, without the need to have such a big device, appliance. That's basically find out the parameters. Then in second step do the combination between these parameters and the right fan system, and after finding the right fan system to optimize the fan itself and geometry around it from the point where the air goes -- can come in until it leaves the cleaning center again.
Q What parameters did you consider as necessary?
A For the first step it's important to know which air flow of the volume in, maybe, liters per second, or in our systems we prefer to talk about liters per second. That's one point. And the second is pressure terms, which pressure is necessary before an obstacle to make this needed airflow pass.
Q Were there any other parameters that you can

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think of?
A Other parameters have to do with these main points, yes, in this first step.
Q Okay. So it would be subsets of the two parameters, does that make sense to you?
A Yes.
Q *And how would you combine -- how would you* combine parameters to select the appropriate fan system?
A Yes. Here we have no rules in the physics of blowers and fans in general that are the so-called --
THE INTERPRETER: Characteristics of -- dimensionless characteristics.
THE WITNESS: Dimensionless characteristics, yes. And, finally, this rules or this -- whether a system fits or not you can check with this dimensional characteristics if they are in a certain region, in a certain rank, then you can derive the feeling or statement that's okay or that's not okay for this task you need.
MR. SHIMOTA: Q So you would use these calculations to essentially task various types of fan systems?
A Yes, theoretically. In this second step because besides pressure and airflow two other main parameters play a role. That's main diameter of a fan

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and the RPM, the turning speed of the fan. And air is air. We know we must not deal with water, but with air.
Q And after you had selected the fan system, you mentioned that you would optimize the geometry?
A Yes.
Q How would you do that?
A Maybe you can imagine that different basic types of this blowers and fan systems we have axial fans, don't want to get too close in details or radial fans where the air flow is different to an axial fan, and also so-called mixed flow sub types. You can use mixture of combination, and as well as what we finally should use here is so called -- in German it's trommelrotor.
DR. STUTIUS: Drum rotor.
THE WITNESS: Dumb rotor. It's a special sub type of a radial fan. Normal -- if it's helpful, normally radial fans are -- try to do the sketch a little bit bigger.
You have the axis here, and these are the blades. Here's the rotation. Air goes in here and passes in this direction. And if this is rather small, the heat, and the diameter is -- the relation of the diameter to the heat is big, great, then it's normal

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fan, but our special -- trommelrotor definitely looked more than this. They have this shape. Very small but high blades for the airflow which can pass like this and that's -- that's a first main characteristic. And also the shape of the blade itself incoming and outgoing angle of this blade is different and in this or that *type.*
MR. SHIMOTA: Q How would the angles of the blades be different?
A If you have look from the top and imagine this is outer diameter and that's inner diameter, and here, this is how it turns, then here more often you have geometries like this, maybe also up to -- sometimes also for other purposes like this, but in the -- in this case here it's often that it looks like this, the plate. And, of course, next one and the next one and so on.
And this causes a different behavior of the -- what's the influence on the airflow. In this simple -- in simple words with a system like this you can better create pressure, and with systems like this you are able to create velocity, but here also velocity and here also pressure, but that's the main task, and here this is the main task.
Q I understand. You said that ultimately you

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would use this type of fan. Did you mean in the shaver cleaning system?
A Yes. That was a result of step 2 from the combination of all parameters we can see, or I can see that this is the system which is -- which we should use in a shaver cleaner.
Q And why was that?
A For me often it's easier to answer with a sketch if it's possible, yes.
Q That's fine.
A If you imagine a hair dryer, for instance, then -- I only do a sketch of the flow system. Then you have an inlet grid and then somewhere the blower, then you have the heater elements. Again an outlet grid and maybe also a nozzle or something. And here this is a system. Here you add the energy, there's a motor. And here and here, here and here you have energy losses. Finally, there is helpful rest to dry the hair.
And this is -- this is a system which needs pressure here, and the pressure finally causes velocity and the whole thing can work. In other situations like in a -- yes, let's use a shaver cleaner. Then you have the head of the shaver maybe here. And what you need basically is here high velocity. Everything else is not

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so important. Therefore, the system has no fluid resistance itself, and that's the reason why at this place you need a blowing system which gives you velocity primarily in its main task, in combination, of course, with a high -- an airflow which is high enough because you can imagine velocity can be high if it only passes a very small hole that it's useless, this high velocity. You need to have a high velocity at least in this complete area as the same with the head of the shaver.
Q And so would you combine the velocity with the actual geometry of where -- not the geometry of the fan, but the geometry of the shoulder for the shaver? Does that make sense to you?
MS. WOLF: Objection do form.
THE WITNESS: Yeah, by you understood, of course, it's important to have between on the short way between the blowing system and the head of the shaver also the right geometry, not too wide, not too narrow, to have an optimal result.
MR. SHIMOTA: Q Do you have any recollection of what the optimal geometry is or was?
A No, that's not a sharp optimum. I cannot answer by so and so many square millimeters, but the fact is if this is the area where the whole airflow has

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to pass, if it's too -- if it's too large then the velocity is too low and if the effect is not optimal. If it's too narrow or too small then not sufficient air can pass. Of course, then the speed is higher, but the airflow itself is reduced and this is not again optimal for the whole system. So here we try to find a good compromise.
Q And how would you reach that compromise?
A Well, of course, you can again calculate if you know the airflow, if you know the cross sectional area, then you can calculate velocities. From the velocities you can calculate pressures, and you can also combine these pressures to what the system calculation gives you and whether it fits, it's too much, too less, just to find the right balance.
Q Is this the type of thing you would use, for example, like an Excel spreadsheet, put in formulas and start varying the parameters to see what is optimal?
A Yes, it can be done with Excel spreadsheets. Maybe at this time I used programs based on Fortran programming language. We had these next machines at Braun at that time.
Q What kind of machines?
A Max.

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Q MacIntosh?
A Max, that was -- from Dec Network, I think. They're out of business.
MS. WOLF: Are we going to mark these?
MR. SHIMOTA: We will.
MS. WOLF: I just want the record to reflect they are not based on any examination at Braun. They're just from memory of sketches, schematics.
MR. SHIMOTA: Q Over what period of time did you work on the shaver cleaning system?
A That's not so easy to answer because it took quite a long time from the first idea to the time where they get in con -- got in contact with me to ask the first questions until you really -- Braun really finalized the product. Maybe 5 years.
Q When you say the first idea, what do you mean by the first idea?
A The first idea belongs to the first step I described before which physical data is necessary to realize the idea, yeah, which pressure do you need, which airflow do you need.
Q So you're referring to your mental processes, is that what you mean?
A Pardon? Could you repeat that?

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Q I want to -- let me try to phrase it this way. Whose idea were you referring to when you say the first idea?
MS. WOLF: Object as to form.
THE WITNESS: Belonging to the drying system or to the whole shaver cleaning system?
MR. SHIMOTA: Q I guess I'll ask for both.
A I think the idea to produce a cleaning center was all -- could already exist when I started and the first steps here -- I did know this, and maybe in 1993 or '94 I was involved in first ideas because colleagues know that -- my main work here deals with fans and blowers and systems like this and, therefore, they start to ask me.
Q Who started to ask you?
A Of course, Mr. Braun who has this job and in this first time I think it was the only person who gets in contact with me.
Q Did anyone else subsequently get in contact with you?
A Later after retirement of Mr. Braun.
Q And who would have gotten in contact with you later?
A Later it was Mr. Höser and also colleagues who

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work -- that time in the small group of Herr Höser.
Q And do you recall the names of those colleagues?
A One was Mr. Jung. Hopefully Jahn is the surname. I'm not sure.
Q Alf Jahn?
A Alf Jahn, yes. Not sure whether the second one Norbert Kreutz is from the beginning of that time involved and Jurgen Höser himself.
Q Do you recall any other names of people who contacted you for assistance?
A I cannot remember other names.
Q Now you mentioned the binders that you kept with your notes. Did you keep a binder related to your work on the shaver cleaning system?
A No. Not a complete binder because that was not a major project for me.
Q Did you keep a file related to your work or did you keep any written records related to your work on the shaver cleaning system?
A I have a binder with the headline in the sense of miscellaneous and among these blowers and blower work for special blowers there is a small section about cleaning center.

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Q During the course of your career how many pages of work do you believe you generated with respect to the shaver cleaning system?
A It was a mixture between pages and documents on the computer. So it -- if -- when I know the information is on the computer then I do not tend to produce too much paper. If I have to if I have to look it up now not more than 10 paper maximum, 10 sheets.
Q 10 sheets of paper?
A 10 sheets of paper, yeah.
Q Do you -- well, how much information would you have retained on the computer?
A This was special information belonging to the calculation with dimensionless characteristics and, of course, calculations belonging to special geometry here, angles, RPMs, diameters, height and in combination with the possibility to create the needed airflow.
Q Did you keep this information on a disk or how did you store it?
A That was stored on the computer, but in combination with old -- older programs and documentation systems.
Q Stored where on the computer, just like a main --

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A A main storage somewhere down in the basement of the old building. Not on a personal computer. Not everything on the personal computer.
Q Do you know whether that computer still exists?
A I definitely know that it does not -- does not exist anymore.
Q Okay. And do you know what happened to it?
A It was not up to date any longer and was replaced by other machines.
Q Do you know when it was replaced?
A Not exactly. The whole system as always was several different machines and they started to give away the first one and so on until the last of the system has to leave.
Q Okay. Did you maintain any of the electronic information on a personal computer? Let me reask it to make sure.
Did you maintain any of the information related to your work on the shaver cleaning system on your personal computer?
A We had a system or a method to collect important documents or calculations, also programs to calculate. As you can imagine you need a lot of time to build up calculation programs, and, therefore, it's hard

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just to give away -- but these were Fortran, written in Fortran programming language. And now I have to say I must look it up whether there is still something left from this on a special -- on a special -- device --
DR. STUTIUS: Disk drive.
THE WITNESS: Disk drive.
MR. SHIMOTA: Q Okay. Well, in connection with this litigation, did attorneys ask you to collect documents related to your work on the shaver cleaning system?
A To keep some of these documents and programs was basically my own intention, yes.
Q Sure. I'm not sure if you understood the question. At some point did attorneys come to you and ask you for documents in your possession related to your work on the shaver cleaning system?
A When we worked together we exchanged the knowledge and the documents, and, therefore, they should have what they know immediately, what we worked out immediately, and, therefore, that's --
DR. STUTIUS: I don't know if he understood your question. If the attorneys approached him to transfer that information to the attorneys, right?
MR. SHIMOTA: Yes.

THE WITNESS: No, not in combination with attorneys.
MR. SHIMOTA: Q So I want to make sure that you understood me. You are aware that there is a case, a patent litigation between Rayovac and Braun currently, correct?
A Yes.
Q And in connection with that -- let me just set it aside.
In the past year have attorneys come to you, attorneys from either outside law firm or within Braun itself, come to you and asked you to provide them with your documents related to -- documents you possess related to your work on the shaver cleaning system?
A No, no.
Q So would you be able to check to see if you still maintained electronic information -- would you be able to check to see whether you maintained -- would you be able to check to see if you still had electronic information related to your work on the shaver cleaning system on your personal computer?
A The Windows Explorer has such a function. That's the way it could work, such function with date, from-to.
Q And have you recently performed that search

function?
A I tried, but only with few results.
Q Why did you try?
MS. WOLF: That's fine. You can answer that.
THE WITNESS: In combination with our meeting we had before and you ask me whether I have possibility to find documents, therefore, I started to search machine.
MR. SHIMOTA: Q That's where I think there's some confusion.
So during this past week, past week attorneys asked you to look for documents, is that right?
A That's right, this week.
Q Had you been asked to look for documents by attorneys prior to that time?
A No, definitely not.
Q So I take it then you would not have provided any documents to attorneys related to your work on the shaver cleaning system prior to that time?
A That's right.
Q I understand. And in connection with the request that you received this week, you were unable to locate documents or the electronic information pertaining to your work on the shaver cleaning system, is that correct?

MS. WOLF: Objection.
MR. SHIMOTA: Q I misstated your testimony. Apologize.
During this past week you were able to locate a few results within your personal computer, is that correct?
A That's correct, few results.
Q When you say a few, can you tell me how many?
A I handed -- show you two documents, that's right? Yes, two.
Q I'll mark them as exhibits. We'll mark them as an exhibit in a second -- I can do it. They're just out of order. I'll mark as defendant's Exhibit 39, a document that does not bear a Bates number yet, but appears to be a memo from yourself to Jurgen Höser on March 26th, 1995.
(Exhibit 39 marked as requested)
A That's one of these documents, yes.
Q I'll mark as defendant's deposition Exhibit 40, a document which appears to be authored by yourself on September 12th, 1997.
(Exhibit 40 marked as requested)
A Yes.
Q Are these documents that you were able to

locate on your computer?
A That's are the two documents I found this week.
Q Were you able to locate any others on your personal computer?
A Not so far.
Q You mentioned that you -- you once had a note -- miscellaneous notebook had some documents in it related to your work on the shaver cleaning system. Does the miscellaneous notebook still have those documents related to the work on the shaver cleaning system?
A Here I'm not sure because so far I did not find this ring binder.
DR. STUTIUS: Ring binder.
THE WITNESS: Right binder.
MR. SHIMOTA: Q So -- okay. Let me see if I understand. At present you don't know where the miscellaneous binder is?
A This should be somewhere among lots of documents I have in my box, but not in the first row and, unfortunately, I really had no time to spend more than this computer search time to find anything.
Q To the extent those documents still do exist, we would request production of them. Set those aside.

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We'll ask you about them. I will ask you about them.
I'm guess going to mark now first as defendant's Exhibit No. 37, English translation of a document bearing the Bates number B4610 to B4616.
(Exhibit 37 marked as requested)
Q I have the German version too so you don't have to worry. A document -- I'd like to mark as defendant's deposition Exhibit No. 38 the German version of B4615 to B4616 which appears to be a memo written by yourself on -- in August -- August 3rd of 1993.
(Exhibit 38 marked as requested)
Q Take whatever time you need to review the document, but if afterwards you can tell me whether you recognize it, which would be defendant's Exhibit No. 38.
A It's not so difficult to recognize because I see my handwriting here, and it's also my style of writing at that time.
Q When you say your style of writing, what do you mean by your style of writing?
A Maybe you know people who studied mechanical engineering tend to always to produce this rectangular lines.
Q Let me ask this question. Is this a document -- and -- did you produce this document to lawyers in

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connection with this litigation? Let me ask -- let me try.
Did you find this document in your personal files and give it to lawyers?
A No.
Q At any time.
A No.
Q Doctor -- you see the name Dr. Jung?
A Uh-huh.
Q Do you know whether Dr. Jung has provided any documents to lawyers in connection with this litigation?
MS. WOLF: Objection.
THE WITNESS: I don't know.
MR. SHIMOTA: Q Do you know -- let me ask you this.
Do you have any reason to believe that this document would have been provided to the patent department at some point in the early '90s?
A The early '90s?
MS. WOLF: Objection.
THE WITNESS: I can't tell you what happens with this document. What I can tell you I typed it in and distributed it and then took its way.
MR. SHIMOTA: Q And the people to whom it was distributed would have been Mr. Braun, Dr. Pahl and

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Dr. Jung?
A Yes.
Q And would you have distributed it to anyone else to the best of your recollection?
A No, I don't think so.
Q During or at or near this time period did you ever have any discussions with attorneys at Braun regarding the shaver cleaning system?
A No, only discussions with technical colleagues from the technical department.
Q Did you have discussions with Dr. Pahl?
MS. WOLF: Objection. Regarding the shaver cleaner?
MR. SHIMOTA: Q I mean did you know Dr. Pahl?
A Yeah, because normally you know all the directors here in house and, therefore, also know Dr. Pahl.
Q Let me ask you this. Why did you distribute contribute this memo to Dr. Pahl?
A He was not manager, supervisor of Mr. Braun and Dr. Jung was my boss at that time.
Q Did the -- at that time did you know whether Dr. Pahl had any involvement with the shaver cleaning system?
A Of course, involvement, sure. He was the

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leader of the shaver department. He should know what is happening in this department.
Q Did you know whether Dr. Pahl had personally worked on the shaver cleaning system at this time? When I say at this time, I mean approximately August of '93.
A That depends on the definition of personally worked. I'm sure that he did no sketches on the big box, he did not -- no calculations. I cannot imagine that he did special investigations in the lab or something.
Q Well, at this point in time had you seen a shaver cleaning -- had you actually seen a physical shaver cleaning system?
A Yes, but this was more -- different to what appeared in the market later on.
Q This was in early -- this was an early model?
A An early model, yes.
Q And at that time did you have any knowledge as to who had developed that model?
A The shaver cleaning model always were in connection with Mr. Braun, yes.
Q So it was your belief that Mr. Braun had developed the model of the shaver cleaning system?
A Yes.

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Q Did Mr. Braun tell you that he had developed the shaver cleaning system?
A Yes, it was quite obvious. I cannot tell you whether he came to me and tell me here, I developed this model. I assumed it.
Q Well, in general how did you start working with Mr. Braun on the shaver cleaning system?
A Okay. It's long time ago. I can't tell you how the start was exactly. Normally we had phone calls, can you give me a hint, do you have additional ideas, can we come together to discuss this and so on.
Q Do you have any recollection as to how much earlier than August 3rd of '93 you would have begun working with Mr. Braun?
A In my feeling we started somewhere in 1993 because especially this paper belongs to the first step I explained to find out parameters which we need to have a good drying result finally, yeah.
Q You see at the top of this page at least in my English version it says meeting notes.
A Yes.
Q Was it regularly your practice -- I think you said earlier you had a practice if a project was important enough you would type out meeting notes.

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A Yes.
Q Am I correct this was a project that you considered important?
MS. WOLF: Objection.
You can answer.
THE WITNESS: Maybe this was the kind of milestone. At that time it was important to document that before you spend a lot of money trying this or that, and maybe a third method you should know what -- which parameters you have to know to go forwards in the right direction without losing time and money. And in this context it's helpful to have more or less shop document and to fix the main ideas, yeah, that was it.
MR. SHIMOTA: Q Do you recall -- at or near this time period do you recall whether any other milestones occurred?
A I think a second milestone after we know more or less what we need here is to in combination with maybe the second step to decide what I sketched here that this type of blower is the correct one and not different blowers they might have used before because at that time Braun also produces small hair care appliances and inside we had small blowing systems. And I can remember they -- he started to build up his model with

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an axial blowing system and that was one result that the whole system can be improved when you change from the axial system to the so-called trommelrotor.
Q Do you know when that second milestone would have occurred approximately?
A Not exactly. I'm not sure whether Mr. Braun or later Jurgen Höser did this step.
Q What would you need to see in order to be able to answer my question, if anything? Let me reask that.
Are there any documents which would refresh your recollection as to when the selection of the particular fan occurred?
A If you could show me the models and maybe in the meantime you know the time when they were built, then I can tell you this model has an axial fan and this was the first with the other system.
Q We might be able to do that. Were there any other milestones aside from the first and second -- well, you described this document as a milestone. You remember a second. Were there any other milestones?
A It depends on the definition of milestone, of course. During the third development period we had a lot of detail work together with the guys in the Höser group because it's not only important to have the

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perfect blowing wheel itself, but also the whole surrounding has to be adopted, especially when you use blowers s like this.
Q How does it -- was it adapted the way we discussed earlier, the surrounding, or you mean something different?
MS. WOLF: Objection.
THE WITNESS: What you need if you have a look from the top and, finally, air has to leave the system somewhere here, but, you know, it blows out air everywhere around the circumference, and then you have -- let me say to collect this airflow and direct it to this main area.
And this is done with a kind of spiral geometry. And this spiral geometry has to be good enough -- not something like this, bigger, bigger, but very continuous, continuously, this was one point. And also the air comes in from this direction and somewhere in the outer surface the whole system has an opening, and also this geometry can be optimized if this is the final point where the air goes in here, and then the geometry up to this point, it's -- it's not bad if it has the basic shape like this, and this in combination with given design of the whole appliance and -- if I can

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remember the whole system had a special angle inside that makes it a little bit more tricky. Especially this point to mention perhaps one detail. After the blower you have a high pressure and here you have the normal pressure, the ambient pressure, and it's always helpful if you have geometry here that it's not possible or not so easy possible to let the airflow back then the efficiency is not so high.

MR. SHIMOTA: Q You mentioned that a special angle, is that a special angle in the trough to enable draining?

MS. WOLF: Objection.

MR. SHIMOTA: Q Do you recall that?

A Yes, the whole shaver is not in the correct angle positioned inside, but maybe to 50 or 10 -- turned in two directions, and, therefore, also the final cross sectional area to provide air to the head of the shaver cleaner should have --

THE INTERPRETER: Angle or tilt.

THE WITNESS: The same angle, yes.

MR. SHIMOTA: Q Would that have been around 1987 where there would have been tilt to the --

A I know these details I discussed together with Jurgen Höser well as Alf Jahn, and later also with

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Norbert Kreutz.

Q Were there any other milestones aside from what we've just discussed which you can think of?

A No, I think if we call it milestone these are the basic steps. Everything else is more or less detail belonging to the tool itself and to things like here.

Q I think you said you worked on this project, and I suppose I'm not saying continuously, but I worked on this project over a period -- well, your work on the shaver cleaning system took place over approximately 5 years, is that correct?

A That was my feeling before and up to now, yeah.

Q Would you characterize your work as difficult?

A Not difficult. It was interesting because this system is different to what we normally have in hair dryers and the rules and the formulas are a little bit different and, therefore, it was interesting for me.

MS. WOLF: Jim, when you get to a good point, if we could just take a break for a few minutes.

MR. SHIMOTA: Sure. Why don't we take one now.

THE VIDEOGRAPHER: We're going off the video record of tape number 1 at 11:24 a.m.

(Off the record)

THE VIDEOGRAPHER: We're going back on the video

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record of at 11:37 a.m. Here continues tape 1.

MR. SHIMOTA: Q If you could direct your attention again to defendant's Exhibit 38, please. I'll read in English and you can look at the German version, of course. It states -- in the title it says, principle of the prototype, actual state.

What do you mean by principle of the prototype?

A The prototype means they already had a principle sample, functional sample available and -- yes. I think he showed it to me, and as I can read here he complained about noise, that it's not efficient enough.

Q So is this -- is it correct that this is a description -- at least a description of some of the operation of the prototype which Mr. Braun showed to you?

A Yeah, yes, sir.

Q It states in the first sentence, the used shaver is placed downwards with the soiled shaver head into the cleaning device and is firstly rinsed with cleaning fluid and is then dried in a coiled air stream. Do you see that?

A Yeah.

Q What did you mean by cold air stream?

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A With ambient temperature.

Q You mean room temperature? Yeah. That's same thing.

So is it correct that the control type that you're describing was not heating the air from the blowers?

A Yes.

Q It states in the next sentence, the drying times are, however, still too long according to Mr. Braun or the drying room result is not satisfactory.

Do you recall how long the drying times were approximately at that point?

A I can't remember this.

Q Would it have been longer than an hour?

A I don't think so. Not longer than an hour. Finally, my cleaning station at home needs approximately maybe 15 minutes for the whole process and -- 15 or 20 minutes.

Q Was -- was -- at that point in time to the best of your recollection was 15 minutes approximately the target that you and Mr. Braun were shooting for?

MS. WOLF: Objection.

THE WITNESS: I don't know exactly.

MR. SHIMOTA: Q It also says that or the drying

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result is not satisfactory.
Aside from the time length, was there anything else that you recall which was unsatisfactory?
A What can happen is that the head of the shaver was already dry in one corner and the other corner was still wet so that the distribution was not so perfect.
Q And why did that affect occur?
A One reason could be that the airflow was not distributed -- not evenly, but has a spot at one side and too less airflow at the other point.
Q Do you recall any other drying results which were unsatisfactory?
A No, it took too long time and maybe it was uneven, yes.
Q And it says in the second sentence that a further problem was the noise from the blower?
A That's right.
Q And is the noise -- would the noise be similar to what you would hear with a hair dryer today?
A Depends on the definition of similar. Because it's similar to the hair dryer when you compare it to the noise of a music instrument, for instance.
Q Well, how -- what -- to the best of your recollection what about the sound was disturbing, just

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the volume or --
A As I can conclude from what I see here they used a rather small axial blower from a hairstyler, long but thin diameter. Therefore, it was necessary to increase the speed of the motor, and this is always the reason for higher velocity and also for what we call sharp discrete peaks, something like a whistle, nervous -- not nervous, but nerving --
Q You heard a whistling sound?
A Yes, always the same tone and not continuous or -- even sound.
Q I understand. It also lists there, I think, 31 millimeters?
A That's what they found and what was feasible for this first models, small, small blower.
Q What dimension is the 31 millimeters referring to?
A It should belong to the outer dimension of the blower itself. Normally the blower is in a shroud, and then what's really of interest for the function is the outer dimension of the blower. Because if you increase the thickness of the wall of the shroud then that cannot help but makes it only thicker.
Q When you say outer dimension, you mean the

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outer diameter?
A Outer diameter, yes.
Q Underneath that paragraph it states improvement of the drying qualities. Do you see that?
A Uh-huh.
Q Was it the purpose of your meeting with Mr. Braun to discuss how to improve the drying qualities of the shaver cleaning system?
A Yes.
Q Did Mr. Braun ask for your advice as to how to improve the drying system -- excuse me. Improve the drying in the shaver cleaning system.
A Yes, he asked for my experience and advice.
Q And, in general, what did you advise Mr. Braun?
A I think the main points are also written down in this paper. The -- as I can see it now it was not quite clear how many -- which quantity of airflow they really need to have a good result, and it's possible with different methods to create an airflow to find out what you -- to first to find out what you need. And I think I made some suggestions how this could be realized to find out what is a good solution and what you can also do certain variations of this.
Q Would that be represented by the drawings in

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the memo?
A Yes, also.
Q Were there any other -- aside from what's represented in the drawing, were there any other suggestions that you made? Let me ask this. I'm sorry. I thought maybe the question was confusing.
A Not so easy to answer.
Q There are -- underneath it says improvements of the drawing quality, then there are numbered paragraphs, 1 through 5. Do the numbered paragraphs numbered 1 through 5 represent suggestions that you made to Mr. Braun for improving the drying in the shaver cleaning system?
A Yes. Here we try to summarize the points we worked out together and the points we discussed.
Q Okay. I mean, for example, in point 4 there's recommended it states in the case, the drying still takes too long with these measures. The installation of a small heater for the air stream should be discussed.
Now, did you suggest to Mr. Braun to -- he might want to include a heater with the blower to improve the drying?
A I cannot answer with yes because it's hard to remember. If you deal with hair dryers then that's a

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known principal, but not only for me also for other all others here in the company.
Q Well, the participants in this meeting were yourself and Mr. Braun, correct?
A Yes.
Q So is this reflecting discussions you had with Mr. Braun, is that correct?
A Yes, but here our common ideas are written down, not only my opinion. It's what we discussed together, what we found out together.
Q So point 4 -- well, is point 4 to the best of your recollection a common idea that you had with Mr. Braun?
A Maybe this belongs to patent situation. I cannot definitely tell you now whether he already had the idea to combine it with a heater or whether it comes from my side because it's not so -- not so far away. Everyone knows if the air is a little bit hotter then it's helpful to dry something.
Q When you say everyone knows, what do you mean by everyone?
A Everyone -- maybe everyone in this room even knows.
Q You give me a lot of credit.

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A Hot air. Hot air is always better than cold.
Q Well, if Mr. Braun did not suggest using a heater with the fan in this meeting, is it fair to say it would have been your suggestion?
MS. WOLF: Object as to form.
THE WITNESS: If not what would have happened?
MR. SHIMOTA: Q Let me ask this question. Would there have been anyone else at this meeting aside from yourself and Mr. Braun who would have suggested using a heater with the fan?
MS. WOLF: Objection.
THE WITNESS: In this meeting we were he and me and no one else so far.
MR. SHIMOTA: Q So it was yourself and Mr. Braun.
A Myself and Gebhard Braun I think is his first name, Gebhard Braun.
Q Is there anything which would be able to assist you in remembering whether or not the idea to use the heater would have been yours or Mr. Braun's or a joint idea?
MS. WOLF: Objection.
THE WITNESS: If you can find the paper showing the heater then I could not answer if the idea already exists, if it was new. Basically a combination of a

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blower and a heater element was not new at all for appliances we built, case of hair dryers.
MR. SHIMOTA: Q I understand. So I guess back right before the break we -- I asked you whether you considered your work on the shaver cleaning system to be -- I think I used term the difficult -- whether you considered your work on the shaver cleaning system to be challenging.
A Yes, it was some kind of challenging because as I told you it was not -- the system was difficult to what we normally use in hair dryers, and, therefore, it was challenging and interesting to complete the knowledge in this -- knowledge in this special direction.
Q And what was challenging about the work in particular?
A Yes. Normally you have to develop in connection with hair dryers a system which finally provides high pressure. And as I explained before, and here you need to find a system which basically gives you a high velocity. And that was the main difference besides the whole geometry and things like that.
Q And these -- were these challenges which you had encountered previously in your work at Braun?

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A Yes.
Q What situations have you encountered those challenges?
A During these first years I did not -- I worked in the research department and here it -- my task was not only to develop axial blowers, axial fans, especially for hair dryers, but also for other blowing systems, also for kitchen machines, for ventilators and, finally, for an idea like this. And, therefore, it was the whole range I tried to occupy with my knowledge.
Q And do you know why Mr. Braun -- did Mr. Braun ever express any reason which he asked you in particular to help him with the work on the shaver cleaning system?
A That was more or less a normal practice. You start with a project for your own and after these first steps if something more complicated occurs, then you get in contact with at least so-called experts.
Q So -- I mean is it generally the case at Braun that as the design is progressing if a particular problem is encountered then an engineer will seek an expert to assist him?
A Yes.
Q And in assisting Mr. Braun to overcome these problems with the prototype, you called upon your expert

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-- the expertise that you had gained through both your education and your experience at Braun, is that correct?
MS. WOLF: Objection.
THE WITNESS: Yes.
MR. SHIMOTA: Q If you could turn back to the first page of this document. If you see listed under the second bullet point there's indicated a laminar flow element for flow rate measure. Do you see that?
A Uh-huh.
Q Tell me what your understanding of the laminar flow element is?
A This is a special measuring instrument to measure the amount of airflow passing through a system, through a pipe, small pipe.
Q What would the purpose of the laminar flow element have been in the shaver cleaning system?
A The discussion was not like this to integrate it into the system, but to use it to find out which parameters, especially which airflow would be optimal for the system. So the idea was to measure the airflow outside with this kind of instrument because if you only blow like this, you feel it, maybe you can also measure how long it takes to dry something, but, finally, you do not know how many air this really is. So you have to

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measure it and that's not so easy sometimes.
DR. STUTIUS: Trivial.
THE WITNESS: Not so trivial.
MR. SHIMOTA: Q What -- when can it be difficult or nontrivial, under what circumstances can it be nontrivial?
A In general if I blow like this, nobody knows how many liters per second go through my hand now. And to know this you have to use instruments like this. There are a lot of different instruments and this is -- I think a very precise instrument to find this out.
Q How did you learn about measuring or instruments for measurement of the sort we're talking about?
A I think that was part of my job here, not only theory, but also lab work and practical things.
Q So would have been some of the education you received either through your studies at the university or practical experience at Braun?
A Yes, learning on the job.
Q And I guess for testing, if you look to the next bullet point, what would have been the purpose of the one or more narrow inflow nozzles?
A The idea was if you concentrate the airflow

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directly to the point where the foil is still -- is wet and not somewhere around where you don't -- where it makes no sense for it to pass, then the efficiency can be increased. Also to direct the air flow directly to the point where it's needed.
Q That was the purpose of having the nozzles being small?
A Yes, yes.
Q Relatively or –
A If it's small then the velocity can be higher up to a certain amount. If you make it really very, very small then the opposite thing can happen, yes.
Q Under the fourth bullet point it states that the holder for shaver head with improved air ducting. What did you mean by holder for shaver head?
A Second, please.
Q Sure.
A I think this belongs to geometry of the -- of where you put the shaver head inside. If this geometry is different to the shape of the shaver itself, then it can cause troubles. If this is the shaver head, and the geometry would have been like this, that's not optimal. It's better to have a more or less similar geometry around the head of the shaver.

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Q When you say relatively, how -- to your recollection how closely would the holder conform to the shape of the shaving head?
A Well, the design sign of the shaver itself has a lot of details on here, on the left and right side. And for the cleaning center it's more or less only important to have the main outer shape in a certain length.
Q Do you know -- similar to the question I asked before. The improved air ducting, whether that would have been your idea, Mr. Braun's idea or an idea which you developed together?
A Air ducting is -- of course, he ask me what can be, what can I improve with the whole geometry to have a better result finally. And there are several points as maybe I sketched here. This would be an example for a bad air ducting and that's obviously better there.
Q Okay. Do you know if -- if when you expressed these idea -- that particular idea to Mr. Braun whether he disagreed with you?
MS. WOLF: Objection.
MR. SHIMOTA: Q Let me ask it. You're right. Did Mr. Braun ever express disagreement to you with -- did Mr. Braun ever express disagreement with the

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ideas that you presented to him?
A No, I don't think so. It was a technical discussion not a principle discussion.
Q When you say a technical discussion as opposed to a principle discussion, what do you mean?
A Technical discussion you can argument with formulas, with technical knowledge, and that's different maybe discussion about what you believe or what you do in your leisure time.
Q I see what you mean. If you look under point 1, it says, the nozzle shaped inflow on the outlet cross-cut should have the same longish, narrow shape as the shaving foils. Do you see that?
A Uh-huh.
Q Why should the nozzle shape inflow on the -- well, first I'll ask you now, was that your opinion, Mr. Braun's opinion or a joint opinion?
A I think it was a joint opinion.
Q And why was that your joint opinion?
A Because it was no discussion. If this is the side of the shaver head with the shaver here it's always better to have the airflow from here to here and not only here and here, like a spot, but on a cross-sectional area, what's written down here which has

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more or less the same size as head of the shaver.
Q Same size in what respect?
A The width of the shaver. There's no need to enlarge this area where the air can pass because here it makes no sense. It passes the shaver. But if it's like this then the principle is okay.
Q Okay. So basically the holder would conform tightly to the outside of the shaver head, is that what you're saying?
A Yeah, yeah.
Q And that -- well, having the outside of the holder conform tightly to the shaver head was advantageous in terms of drying?
A Yes, because then the efficiency can be increased, yeah.
Q I think you said it's always better, is that correct?
A Yeah, if you imagine air passing in regions like here, it's more or less useless.
Q If you look in the last sentence under point 1, it says a slightly inclined inflow in the direction of the tip of the shaver head is also advantageous.
I'll ask you, was that your opinion, Mr. Braun's opinion or an opinion you developed jointly

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with Mr. Braun?
A This comes from the discussion. Exactly I cannot tell you.
Q So this would have just arisen out of the discussions you were having with Mr. Braun?
A Yeah, yes.
Q Why was a slightly inclined inflow advantageous?
A The catches -- partly can answer this. If -- again this is the shaver head from the side and this is bottom. If the airflow starts here then it has the chance what you do not want to go in this and this direction.
This is the direction you want the air to pass and this is a kind of loss. And if you have a system more like this, and this is the inflow angle which is discussed here, then it has no chance for a turn around and go this way. Then it more or less 100 percent has to take this way passing at the right position and do its work.
Q What angle would be optimal to achieve that effect?
MS. WOLF: Objection.
THE WITNESS: It's hard to say. This is not optimal

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if it comes right from the top. It's the same, not optimal. Somewhere in the middle or little bit less.
Q So you'd need to know the shape of the holder for the shaver head in order to answer that question, correct?
A This question can be answered in -- when having all details together, you know.
Q Okay. Was that -- how did you come to -- how were you able to determine with Mr. Braun that the slightly incline -- use the right word. The slight incline in the inflow was advantageous?
A Again the basic idea was to increase the efficiency. And as I explained here, we looked for ways that each particle inside this air flow is helpful for this purpose here, what do you want to do.
Q Well, how were the two of you able to come to the last conclusion expressed under point 1 is my question.
A Point 1.
Q The statement a slightly inclined inflow in direction of the tip of the shaver head is also advantageous.
A One reason as I tried to explain here, other angles are not so advantageous, therefore, it's always

helpful to have no additional obstacles in the airflow, and this is one way to realize this.
Q You were able to -- were you -- I guess my question is, were you able to come to this conclusion based upon your past experience and course work?
A Of course, if you read a lot of literature and books about fluid dynamic resistance and rules about this then this is common knowledge more or less.
Q That would be a relatively select group though, people who have that knowledge, correct?
A Again please.
Q That's not -- that's a smaller portion -- a relatively small portion of the general populace who reads a lot of books on fluid mechanics?
A Maybe it's also in the lesson how --
DR. STUTIUS: Skilled in the art.
THE WITNESS: Baseless.
MR. SHIMOTA: Q Withdraw that question.
A Avoid corners and edges and all things like this.
Q Under point -- direct your attention to point 2. It says the blower used must, therefore, be in a position to build up a relatively high pressure for the flow through of this nozzle/these nozzles and the

subsequent flower systems. Do you see that?
A Yes.
Q Why was that -- why is that opinion expressed in this memo?
A As I mentioned before there is a strong connection by formula between the air velocity and the pressure. It's always easy if you have pressure to create velocity, and, therefore, if your aim is to press a certain airflow through a given geometry of a nozzle, you need a certain amount of pressure to do this, and that's basic idea which is expressed here.
Q Was that your idea, Mr. Braun's idea or a joint idea?
A This formula exists a very long time before, Bernoulli and company.
DR. STUTIUS: 1800. It's called dynamic pressure.
MR. SHIMOTA: Did you think then this was -- the principle expressed there was obvious?
MS. WOLF: Objection.
THE WITNESS: Yes.
MR. SHIMOTA: Q Is that why in the next sentence -- because of that equation in the next sentence you say arithmetic estimates are possible?
A Yes. That belongs to the -- the dimensionless

characteristics. To use these formulas you need at least these four basic data like pressure, air flow, RPM and diameter and so on.
Q Did you perform calculations on that point?
A Yes, yes. This example is a kind of calculation like this.
Q You're pointing to Exhibit 40?
A Exhibit 40, yes.
Q We'll get to that in a second. Under point 2 again, states at the bottom, the performance of a small Mabuchi CF air styler is adequate. What was a small Mabuchi?
A There is some Mabuchi, Mabuchi, different names, Mabuchi Company producing small DC motors for a lot of different appliances and depending on how many air you need, the amount of airflow, you have to choose more or less bigger size or small one. And here the estimation was that the wattage of more or less small motor is sufficient to deliver the airflow you need.
Q Were you recommending the use of a Mabuchi motor in particular as opposed to a motor from a different manufacturer?
A That's only a statement belonging to the power you need, not to the special company Mabuchi and not to

this or that motor, maybe only to this motor series.
Q Okay. Do you recall what was the wattage for the motor used at that time?
A No, I cannot remember.
Q Do you recall whether there would have been any documents detailing which motor was used?
A If they use the motor inside the air styler because we can look in the documents in the parts list which motor is -- has been inside, but I don't know now.
Q Which documents -- when you say a parts list, what are you referring to?
A That our normal documents, the company needs to -- drawings and parts list that you know how to assemble a device or new appliance.
Q Procurement documents, documents which illustrate what the parts are for a particular device?
A Yes. Each part has a part number and a name and so on, and inside the parts list you write down how many of these parts you need and in the combination to other parts and so on.
Q You said that's normal practice at Braun?
MS. WOLF: Objection.
THE WITNESS: Yes. Everywhere I think in the technical company.

MR. SHIMOTA: Q And is that -- I mean what you do in your normal practice when building a device that you have a parts list?
A Yes.
Q If you could look under point 3 on this memo. In the second sentence it says, the holder for the shaver head must be sufficiently changed so that these free cross cutters fall away at least laterally.
Do you see that?
A Uh-huh.
Q How did the holder for the shaver head in the prototype need to be changed?
A As I understand it now that was more or less the same situation as already described here. The air can pass also in this and these areas here and, therefore, if you -- it was a suggestion if you make it smaller then it's good for efficiency.
Q I understand. I guess at least, you know, putting aside the last 2 points we haven't discussed, just generally characterizing points 1 through 3, is it the point of this memo to state that basically what you've illustrated in that drawing that the holder should be made a little bit smaller on the sides?
MS. WOLF: Objection.

THE WITNESS: Smaller on the sides?
MR. SHIMOTA: Q Tighter.
A Tighter belongs to point 3, I think.
Q Okay. Set that aside. Point 3 is basically making the recommendation that the holder should be tighter on the sides?
A Yes, that's what I can read here, yeah.
Q Do you know if that was your idea, Mr. Braun's idea or an idea you two developed jointly?
A Again I would say a common idea, a known principle.
Q The next sentence it states, the gap blow the head should only be large enough so that the cleaning fluid can flow away.
A Yes.
Q How large or how much -- how large -- what was an appropriate gap below the shaving head?
A I think this sentence belongs to this sketch here. If -- of course, if you can imagine it's too large then the air can pass here close to the head and it can pass here and only the airflow close to the head gives a contribution for the drying result and, therefore -- if on the other hand if it's -- what I tried to remember right now, if it's too small then the

liquid will stay in this small channel here and, therefore, also you need an optimum size.
Q Did you ever determine what the optimum size was?
A I think it was part of all these suggestions that they -- if they want can finally build a testing device to find this out.
Q Okay. Was the testing device ever built?
A I'm not sure.
Q Do you have any idea who would know the answer to that question?
A Of course, Mr. Braun should know. One way is really to build a testing device. Second possible way is to take this idea and already realize in another more sophisticated functional model.
Q I understand. In the last sentence under point 3 it says that a seal of a gap would also be helpful. Explain what you mean by a seal of the gap.
A This belongs to a detail I cannot remember right now. Maybe if there was a special geometry for the liquid to flow away. I cannot remember this detail now.
Q Okay.
THE VIDEOGRAPHER: Counsel, can we change tapes?

MR. SHIMOTA: Yes.
THE VIDEOGRAPHER: Here concludes tape 1. We are going off the video record at 12:23 p.m.
(Off the record)
THE VIDEOGRAPHER: Good afternoon. We are going back on the video record at 12:26 p.m. Here begins tape 2.
MR. SHIMOTA: Q Welcome back. If you look again at the document we've been discussing. Under point 5 it states when using one, then it's underlined, motor for driving the fluid pump in the blower, the additional cost of electronic and mechanical regulation should be considered as both systems operate with different rotational speeds and motor loads and must be inserted next to each other.
Do you see that?
A Uh-huh.
Q Do you recall why you underlined -- underscored the word one?
A Because now I cannot tell you why I underlined this some years ago. But it was the main idea which was discussed, one motor for both systems.
DR. STUTIUS: I think it's from the German because it's -- it's also in -- indefinite article. One could

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be in German A, and it could also be a single. So if you want to emphasize a single you would underline one, A, with an eines for that emphasis.
MR. SHIMOTA: Q I understand. Why did you say it was the main idea or why was it the main idea?
MS. WOLF: Objection.
THE WITNESS: It was the main point of this idea. If you have technical discussions can we do this like this, what can happen, if and so on.
MR. SHIMOTA: Q For this point here -- for point 5 do you recall whether that was the idea of yourself, Mr. Braun or a joint idea?
A I don't think that it was my idea because I always try to have separate motor for my fan.
Q So for point 5 you -- at least it's your belief that was Mr. Braun's idea?
A At least not my idea.
Q Okay. If you could look again at point 4, now that we've taken the time to go through this memo in detail, I was wondering if you had any better recollection as to whether the idea in point 4 was your idea, Mr. Braun's idea or a joint idea?
A Hard to say. Maybe a joint idea, obvious idea.
Q Did you say an obvious idea?

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A Yes.
THE INTERPRETER: Plausible.
DR. STUTIUS: Come to anybody mind.
MR. SHIMOTA: Q I'll just ask you again the German, go through this briefly. If you could just tell me starting at the top, there's listed sketch 1. Can you tell me what is represented by sketch 1 or what principle that we discussed that corresponds to?
A Sketch 1 I think shows the position of the nozzle in relation to the head of the shaver. The nozzle is --
DR. STUTIUS: The düse.
THE WITNESS: Düse and crossed area you can see here.
DR. STUTIUS: The hatch.
THE WITNESS: The hatched area.
MR. SHIMOTA: Q So düse is the nozzle?
A The nozzle, yes.
Q And I guess you see the axes there, the -- does that make sense, the X and Y axis?
A Yes. That's more or less the same sketch from this side and from the -- not opposite side, but 90 degree turned side.
Q And what point or which of the -- which of the

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points does sketch 1 correspond with in your list?
A As documented it's basically connected with point 1.
Q And for sketch 2, can you tell me basically what is represented by sketch 2?
A Yes, here. Point 3. That basically shows that it's better to have no free areas around the shaver head, not to allow the air to pass easily without any contribution.
Q Well, the area with the little dots, is that representing the shaver head with stubble in it?
A Yes, not the holes in it.
Q Oh, the holes. Those would be holes in foil?
A Yes, the holes in the foil.
Q This is basically if -- I don't know if you have your drawings here still. Excuse my reach.
Sketch 2, does that roughly correspond with what we were discussing here?
A Yes. Here in combination with here.
Q Okay. And for sketch 3, can you explain to me what is represented by sketch 3?
A The shaver head -- at that time was already movable and, therefore, we had the idea if the shaver is fixed in the cleaning center then the head turns to --

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maybe to this direction, and then it's -- it's helpful for the airflow to reach also to reach all points of this geometry.
Q Why was it helpful?
A If the opposite would have been realized like this and the air comes from here, this part would have had a good drying and here we call it --
DR. STUTIUS: Dead zone.
THE WITNESS: Dead zone with not so high airflow here in this region, and the drying result is worse and if you turn it a little then -- yeah, it was our idea that we can improve it.
MR. SHIMOTA: Q So the swiveling of the foil or pivoting of the head, did that improve the drying process?
A The geometry of the shaver was given and here was just idea if you move it a little bit towards the airflow that this can be helpful.
Q Okay. So -- I understand. So did -- let me see if I can phrase this correctly.
So you came up with the idea -- well, you came up with the idea because the fact that the shaver pivoted was a given, correct?
A Yes.

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Q You didn't compare -- did you compare a pivoting shaver against a nonpivoting shaver?
A No. As I told the geometry was given and the system was as it was.
Q Looking at sketch 3 again, does that help you recall what the seal of the gap meant in your memo?
A *No because the seal -- no.*
Q Do you have any -- do you have any idea of any documents which would help you recall what the seal of the gap would have referred to?
A No, I can't imagine. Maybe models but not the document.
Q The models of the shavers?
A The combination, yes.
Q Turning to the Exhibit 39 and 40, I guess turning first to Exhibit 39, ask you if you recognize this document?
A I typed it in, that's clear.
Q And what is Exhibit 39?
A That's a kind of calculation which is helpful to decide the precise geometry of such a blower we need for this purpose.
Q Does this document help you recall whether the precise blower had been chosen by this time?

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MS. WOLF: Objection.
THE WITNESS: That was prior to this. First you have to decide which type and then you can calculate details on this.
MR. SHIMOTA: Q So you would have selected the type of blower prior to March 26, 1995?
MS. WOLF: Objection.
THE WITNESS: That means I can continue? Surely, yes.
MR. SHIMOTA: Q Why do you say sure, yes?
A As I mentioned you first have to choose what you need and then you can continue with details.
MR. SHIMOTA: Q Okay. Does this document help you recall how much prior to March of 1995 -- how much prior to March of '95 the blower would have been selected?
A No.
Q Do you know of any documents which would assist you in recalling a date?
A No.
Q You mentioned earlier that if you had an opportunity to see models that might assist you in your recollection?
A Yeah, that could be helpful to remember when we did the change to this special kind of blower.

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Q Just in general what calculations are being shown here?
A In general this is a connection between the geometry without mentioning all the details now and the speed of the fan, and you can calculate absolute and relative velocities and so on.
Q *If you just look at Exhibit -- I guess it's 30* or did I mark it as 39?
MS. WOLF: 40.
THE WITNESS: It's 40 here.
MR. SHIMOTA: Q Yes. Ask you if you recognize this document.
A Yes, it's also from a program I have written.
Q Was this a Fortran program?
A Yes. It was such an example for such a Fortran program.
Q Was this a program that you wrote specifically for your work on the shaver cleaning system?
A No, that's -- you can also use it for other systems.
Q And in general -- well, would you have submitted this document to any person or was this for your own personal use?
A It's definitely for my personal use. I'm not

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sure whether I showed this to colleagues.
Q Okay. What calculations are occurring in general in this document?
A In general this is to find out whether this combination of main diameter RPM needed air volume and needed pressure, give a result and then you can look it up in literature or somewhere else whether you meet kind of optimum with this idea, with this combination.
Q I understand. The only thing I have left, Uwe, I was wondering if you could bring the models in which we took pictures of yesterday just so I can show them to Norbert and see if it helps him recall the date. And that's all I have for you and I'll get you on your way home, enjoy your day off. I'd like for him to be able to see the models.
THE VIDEOGRAPHER: Would you like this to be recorded on the record?
MR. SHIMOTA: We are going to take a very brief break.
THE VIDEOGRAPHER: We're going off the video record of tape 2 at 12:41 p.m.
(Off the record)
THE VIDEOGRAPHER: We are going back on the video record at 12:54 p.m. Here continues tape 2.

MR. SHIMOTA: Q Welcome back.
Just for the record I'll note that I have marked Mr. Smetana's hand drawings as Smetana Exhibit 1 through Smetana Exhibit 5 just so I don't cross over with Kevin in the other deposition.
(Exhibits 1 through 5 marked as requested)
Q That being said, Mr. Smetana, there are now on the table several models of the cleaning system. If you could take the time, and I can hand them to you if you'd like, to look at them and see if any of them assist you in determining or at least being able to say which model would have had the special fan which we've discussed earlier.
A Sometimes it's easy to see. If we start with this one, this is the small axial blower. I think the dimension is -- should be the 31 mentioned in the -- in my report. Coming from the air styler. I'm not sure whether I've seen this before. I don't think so.
What I can tell this was the smallest kind of blower we had available in the company.
Q That is -- at least basically the air styler, the 31 millimeter air styler?
A Air styler.
Q I guess I'll hand you this model.

A Think I've seen this in our model shop. Maybe it was this or another one also in combination with the work of Mr. Braun. It's harder to recognize the fan system immediately up close. So from the first look I'm not sure which fan is inside, but it's not what we finally developed because it looks like the last or very last model here.
Q I guess my question though -- I just want to see if you can recall either a date or in which model the special fan would have appeared first.
I think you told me that would have been prior to March of '95 so I figured these might help.
A As far as I can remember, this could belong to the work of Mr. Braun and he was retired in somewhere --
Q May of '95.
A May of '95, uh-huh, yes. So that's prior to this. I don't think that radial blowing system is inside. To be sure we have to open up, but that's not --
MR. SIEVERS: It's not a functional model. It's not a functional model. So maybe it's only a design model. This is from the design department.
MR. SHIMOTA: Q Well, sitting here today I guess my question is, do any of these models help you to remember

when prior to March of 1995 the special fan would have first been used in a shaver cleaning system?
MS. WOLF: Objection.
THE WITNESS: I think it starts together with the fifth model here on the table. Not -- not the very last, the one before. Here -- up here we have the special inlet geometry and also the fan I described, the special position.
THE VIDEOGRAPHER: Can someone move that model right there? Yeah. Okay.
THE WITNESS: Maybe the other with SDL model could be helpful. No, the other one.
For me this seems a little bit newer than this one, and also inside here should be an axial fan. So from these models on the table now this is the only one which shows the fan system we finally integrated.
MR. SHIMOTA: Q Okay. Let me ask just to be clear -- well, this model is from much later, much later after 1995?
A Developed by Höser and his people.
Q So I take it these models don't help you remember when prior to March of '95 the special fan above been selected?
A It seems so.

MR. SHIMOTA: With that said, the only final question I would -- I would make the ask you look through your miscellaneous notebook for any additional documents you have pertaining to the shaver cleaning system. Otherwise, thanks for your time and no further questions.
THE WITNESS: Do you need the answer for this question?
MS. WOLF: No.
THE WITNESS: Okay.
MR. SHIMOTA: You're done. Thank you.
THE VIDEOGRAPHER: In conclusion for April 29th, 2005. We are going off the video record at 1:02 p.m. Thank you.
(Off the record)
- - - - - -

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STATE OF ILLINOIS)
) SS:
COUNTY OF C O O K)

The within and foregoing deposition of the aforementioned witness was taken before CAROL CONNOLLY, CSR, CRR and Notary Public, at the place, date and time aforementioned.

There were present during the taking of the deposition the previously named counsel.

The said witness was first duly sworn and was then examined upon oral interrogatories; the questions and answers were taken down in shorthand by the undersigned, acting as stenographer and Notary Public; and the within and foregoing is a true, accurate and complete record of all of the questions asked of and answers made by the forementioned witness, at the time and place hereinabove referred to.

The signature of the witness was not waived, and the deposition was submitted, pursuant to Rule 30 (e) and 32 (d) 4 of the Rules of Civil Procedure for the United States District Courts, to the deponent per copy of the attached letter.

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The undersigned is not interested in the within case, nor of kin or counsel to any of the parties.

Witness my official signature and seal as Notary Public in and for Cook County, Illinois on this ________ day of ______________________, A.D. 2005.

____
CAROL CONNOLLY, CSR, CRR
CSR No. 084-003113
Notary Public
230 West Monroe Street
Suite 1500
Chicago, Illinois 60606
Phone: (312) 263-3524

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

BRAUN GmbH,)
)
Plaintiff,)
)
-vs-) No. 03-CV-12428 (WGY)
)
RAYOVAC CORPORATION,)
)
Defendant.)

I hereby certify that I have read the foregoing transcript of my deposition given at the time and place aforesaid, consisting of Pages 1 to 83, inclusive, and I do again subscribe and make oath that the same is a true, correct, and complete transcript of my deposition so given as aforesaid, and includes changes, if any, so made by me.

____
NORBERT SMETANA

SUBSCRIBED AND SWORN TO before me this _________ day of _____________________, 2005.
____
Notary Public

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CASE: BRAUN -vs- RAYOVAC
DATE TAKEN: April 29, 2005
DEPONENT: NORBERT SMETANA

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(SIGNED)______________________________________
Reporter: Carol Connolly

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LEGALINK - CHICAGO
230 West Monroe Street - Suite 1500
Chicago, Illinois 60606
(312) 263-3524 (312) 236-8461
May 9, 2005

MS. LESLEY WOLF
One International Place
Boston, Massachusetts 02110
CASE: BRAUN -vs- RAYOVAC
CASE NO.: 03-CV-12428 (WGY)
DEP OF: NORBERT SMETANA DATE TAKEN: April 29, 2005

Dear Ms. Wolf:

Per your instruction, enclosed is a copy of the deposition transcript, along with the original signature page and errata sheet.

Pursuant to the rules of court in this matter, the transcript is to be read and then signed before a notary public.

If any corrections/changes are to be made, please TYPE or PRINT them on the attached errata sheet, giving the page and line number, desired correction/change and reason.

Please arrange for accomplishment of same and transmittal of the signature page and errata sheet back to our office within 30 days from the date of this letter.

Upon failure to comply, we shall forward an appropriate affidavit of noncompliance to all counsel of record.

Sincerely yours,

____

LegaLink - Chicago

cc: Mr. James Shimota (org)

C.C. Job No. CC126185

Page 2005

CASE: BRAUN -vs- RAYOVAC
DATE TAKEN: April 29,
DEPONENT: NORBERT SMETANA

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(SIGNED)______________________DATE__________

Reporter: Carol Connolly